2007

Seabass culture

Aquaculture Department, Southeast Asian Fisheries Development Center

Pond culture. The recommended stocking density is 5,000 pcs/ha. Water is changed at 40-60% of volume daily during spring tide.

Cage culture. Cage size is 5 x 5 x 3 m with a recommended stocking density of 15-20 pcs/m^3.

About SEAFDEC

The Southeast Asian Fisheries Development Center (SEAFDEC) is a regional treaty organization established in December 1967 to promote fisheries development in the region. The member countries are Brunei Darussalam, Cambodia, Indonesia, Japan, Lao PDR, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam. The policy-making body of SEAFDEC is the Council of Directors, made up of representatives of the member countries.

SEAFDEC's Aquaculture Department (AQD) is located in the Philippines.

AQD is mandated to:

- Conduct scientific research to generate aquaculture technologies appropriate for Southeast Asia
- Develop managerial, technical and skilled manpower for the aquaculture sector
- Produce, disseminate and exchange aquaculture information

AQD maintains four stations: the Tigbauan Main Station and Dumangas Brackishwater Station in Iloilo province; the Igang Marine Station in Guimaras province; and the Binangonan Freshwater Station in Rizal province.

SEAFDEC Aquaculture Department
5021 Tigbauan, Iloilo, Philippines
P.O. Box 256, 5000 Iloilo City, Philippines
Tel: (63-33) 511-9171; 336-2891; 336-2965
Fax: (63-33) 335-1008; 511-8709; 511-9070
Email: aqdchief@seafdec.org.ph
Website: http: //www.seafdec.org.ph

SEAFDEC Manila Office
Room 102, Ground Floor
Philippine Social Science Center
Commonwealth Ave. corner Central Ave.
1101 Diliman, Quezon City, Philippines
Mobile Nos. +63918-919-6904, +63918-910-9443

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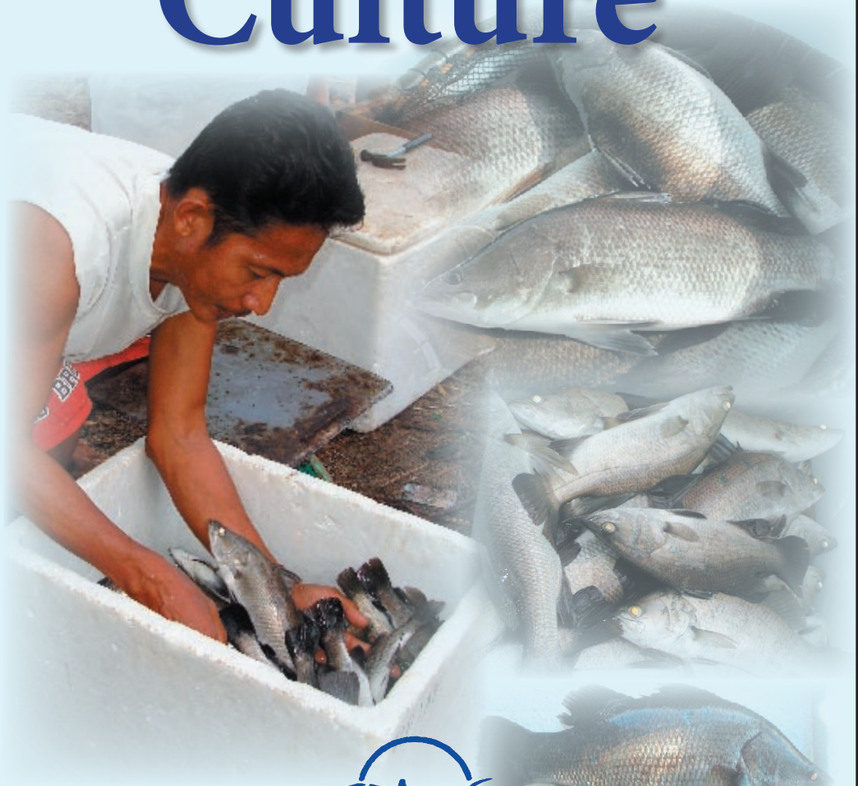


Southeast Asian Fisheries Development Center
Aquaculture Department
www.seafdec.org.ph

Seabass is an economically important food fish in the tropical and sub-tropical regions of Asia and the Pacific. It is a highly carnivorous fish but can be trained to feed on formulated diets. It can tolerate a wide range of salinity from freshwater to full seawater. However, lower salinity (10-20 ppt) promotes better growth.

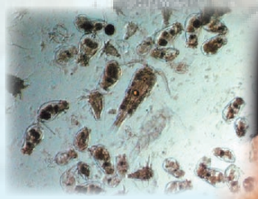
Scientific name : *Lates calcarifer*
Common English names : Giant perch, white seabass, silver seaperch, palmer, barramundi
Local names : Kakap, apahap, bulgan, salongsong, katuyot, matang pusa

Hatchery

Newly-hatched seabass eggs can be raised in the hatchery until metamorphosis, or until the larvae are 15-21 days old or 1.0-1.5 cm total length.

Tanks of 3-25 tons in capacity will be needed, to which 30 larvae per liter will be stocked. The larvae can be fed a combination of natural food (rotifers, then with newly-hatched *Artemia* nauplii) and formulated diet.

Survival rate can range from 50-70%.



Nursery

Phase 1. Seabass fry (15-21 days old) can be reared in earthen ponds, land-based tanks, or in net cages (*hapa)* set in ponds.

Ponds are preferably not more than 2,000 m^2 for easy management.

Ponds are prepared and fertilized at least one week before stocking to eradicate predators and grow zooplankton. This phase can take 10-20 days. Fish are harvested when size is 2.5 cm total length.

Concrete nursery tanks are 3-5 tons where fry can be weaned to formulated diet. They are fed every 2 hours, size-graded every 5-7 days, and harvested or transferred at 2.5-3.0 cm total length. This can take 30 days.

Net cages (*hapa*) set in ponds can measure 2 x 1 x 1 m. Optimum stocking density is 150-200 fry/m^3. Fry are fed with natural zooplankton, mysids, mosquito larvae and/or formulated diet, graded every 5-7 days, and harvested or transferred to B-net when the fry attains 2.5-3.0 cm total length. This can take 30 days.

Lights can be provided to attract zooplankton and encourage fish foraging during the night.

Phase 2. At this stage, fish juveniles are fed trash fish or formulated diet 6x per day until they reach 20-50 g, the ideal size for grow-out culture. Phase 2 nursery can be done in concrete tanks or cages in ponds.

In concrete tanks (3-5 tons), juveniles are fed with formulated diet every 2 hours. Juveniles are graded and the tanks cleaned every 5-7 days.

In ponds, B-net cages can measure 2 x 3 x 1 m or 1 x 3 x 1 m. The same procedure is used as in the above and the fish are harvested at 7-10 cm total length.

Grow-out

Seabass juveniles are stocked at about 20-50 g average body weight. They are fed fish by-catch at 5-10% biomass or formulated diet at 3-5% biomass given 2-3x per day. Seabass can reach marketable size of 300-600 g in about 4-7 months.

Grow-out culture can be done in ponds or cages.